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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/559,175	04/27/2000	Wataru Matsumoto	2611-0125P	2265

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EXAMINER

HARPER, KEVIN C

ART UNIT	PAPER NUMBER
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2666

DATE MAILED: 06/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/559,175

Applicant(s)

MATSUMOTO ET AL.

Examiner

Kevin C. Harper

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04/27/00.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 April 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2-3, 5.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. Figures 19-25 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated (pages 1-13, especially page 4, lines 17-22, and page 26, lines 8-10). See MPEP § 608.02(g). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 11-12 and 15-16 are objected to under 37 CFR 1.75 as being a substantial duplicate of claims 3-4 and 7-8, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). Examiner suggests in claims 11-12 and 15-16, "communication system" in the preamble be changed to --communication method--.

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Specification

4. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed. The following title is suggested:
"Bit Assignment in a Communication System and Communication Method."

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 3-4, 7-8, 11-12 and 15-16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 4 and 8 of U.S. Patent No. 6,747,992 in view of applicant's admitted prior art.

5. With the exception of uniform distribution of data, the '992 patent discloses in claim 1 all the limitations of claims 3 and 11 of the present invention, in claim 2 all the limitations of claims 4 and 12 of the present invention, in claim 4 all the limitations of claims 7 and 15, and in claim 8 all the limitations of claims 8 and 16 except additionally the limitations reciting reproducing the first and second data. Applicant's admitted prior art discloses that bits are assigned such that data for one period (figure 24, FEXT section using symbol A; figure 25) are transmitted

uniformly over that period (page 12, lines 13-22; page 12, line 25 through page 13, line 8) and data for a quasi-data transmission period are transmitted uniformly over that period (page 12, lines 23-24; note: a uniform incoming bit stream before rate conversion is transmitted uniformly during the use of each symbol in the symbol A bitmap and symbol B bitmap), or uniformly transmitted over a period not for quasi-data transmission (page 10, lines 19-25; page 11, lines 21-23; page 12, lines 5-13; note: a uniform incoming bit stream before rate conversion is transmitted uniformly during the use of each symbol for the symbol A bitmap). Therefore, it would have been obvious one skilled in the art to have claim limitations of a uniform distribution of bits (bitmapping) in a data transmission period in the '992 patent in order to provide an appropriate transmission apparatus for uniform input data (specification, page 10, lines 19-25).

6. Further, the '992 patent additionally recites that the data transmission time period is during a far end cross talk section and the quasi-data transmission time is during a near end cross talk section. The claims of the present invention merely broaden the scope of claims 1, 2, 4 and 8 of the '992 patent by eliminating elements and their functions of the claims. It has been held that the omission of an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA). Also note *Ex parte Rainu*, 168 USPQ 375 (Bd. App. 1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art.

7. Further regarding claims 8 and 16, Applicant's admitted prior art discloses reproducing transmitted data (figure 22). Therefore, it would have been obvious to one skilled in the art to have claim limitations of a receiver for the transmitted data in order to correctly decode original data sent from a transmitter to facilitate communication.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1-2, 5-6, 9-10 and 13-14 are rejected under 35 U.S.C. 102(a) as being anticipated by applicant's admitted prior art as described in figures 19-25 and pages 1-13 of the specification.

8. Regarding claims 1, 5, 9 and 13, Applicant's admitted prior art discloses a communication system or method (figure 21; page 6, line 22 through page 7, lines 2 and page 4, lines 23-25) which sets a data transmission time which is the time suitable for data transmission in a period (figure 24, FEXT section using symbol bitmap A; figure 25) and a quasi-data transmission time not during the same period (NEXT section using symbol bitmap B), in accordance with a transmission path (Figure 20). Bits are assigned such that data for one period can be transmitted uniformly over that transmission time period (page 10, lines 19-25; page 11, lines 21-23; page 12, lines 5-13; note: a uniform incoming bit stream before rate conversion is transmitted uniformly during the use of each symbol during the period for symbol bitmap A). The data transmitted within the time period is reproduced (figure 22; page 9, lines 8-17).

9. Regarding claim 2, 6, 10 and 14, Applicant's admitted prior art discloses a communication system or method (figure 21; page 6, line 22 through page 7, lines 2 and page 4, lines 23-25) which sets a data transmission time which is the time suitable for data transmission

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in a period (figure 24, FEXT section using symbol bitmap A; figure 25) and a quasi-data transmission time not during the same period (NEXT section using symbol bitmap B), in accordance with a transmission path (Figure 20). Bits are assigned such that data for one period (figure 24, FEXT section using symbol bitmap A and NEXT section using symbol bitmap B; figure 25) are transmitted uniformly over that period (page 12, lines 13-22; page 12, line 25 through page 13, line 8) and data for a quasi-data transmission period are transmitted uniformly over that period (page 12, lines 23-24; note: a uniform incoming bit stream before rate conversion is transmitted uniformly during the use of each symbol during the periods for symbol bitmap A and symbol bitmap B). The data transmitted within the time period is reproduced (figure 22; page 9, lines 8-17).

Allowable Subject Matter

10. Claim 3-4, 7-8, 11-12 and 15-16 would be allowable if rewritten or if a terminal disclaimer is filed to overcome the double patenting rejection, set forth in this Office action.

Conclusion

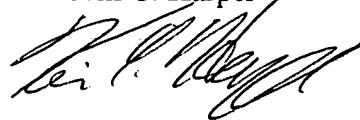
11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Okamura (US 6,714,520) discloses a bit mapping for an ADSL transceiver during TCM-ISDN use (figures 1 and 15).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Harper whose telephone number is 703-305-0139. The examiner can normally be reached weekdays from 11:30 AM to 8:00 PM ET.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao, can be reached at 703-308-5463. The centralized fax number for the Patent Office is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see pair.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kevin C. Harper



June 12, 2004